

S12-01

VARIATION IN OXYTOCIN RECEPTOR GENE AND PSYCHIATRIC ILLNESS

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Oxytocin (OT) is an evolutionarily conserved nonapeptide that is produced in the magnocellular neurons of hypothalamic paraventricular and supraoptic nuclei. The widespread intracerebral projections of OT-producing neurons subserve its role as a neurotransmitter and neuromodulator. OT is well known for its functions in reproduction, including parturition and lactation. In recent years, the effects of OT on social interaction have become a focus in both normal and abnormal psychology research. OT attenuates fear responses, improves empathy and also exerts major effects on pair-bonding and attachment.

Studies have revealed that polymorphic variation of the oxytocin receptor gene (OXTR) also influences stress reactivity and empathetic responses in humans, as well as temperament, and even amygdala volume. This clearly implies that OXTR variation interacts with environmental contingencies, such that it can be regarded an interesting target in psychopathology research.

OT has the potential to ameliorate symptom severity in psychiatric conditions such as social anxiety disorder, autism and schizophrenia. Accordingly, future research into the interaction between OXTR variation and environment may contribute to clarify the role of OT in psychopathology.